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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,980	05/20/2002	Paul A. J. Morris	65008-034	1133
7590	04/14/2005			
Harold W Milton Jr Howard and Howard Attorneys The Pinehurst Office Center Suite 101 39400 Woodward Avenue Bloomfield Hills, MI 48304				EXAMINER FISCHER, JUSTIN R
				ART UNIT 1733
				PAPER NUMBER DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/031,980	MORRIS, PAUL A. J.
	Examiner Justin R. Fischer	Art Unit 1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 17 March 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,4-10 and 13-15 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,4-10 and 13-15 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 17, 2005 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 6-8, 10, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris (WO 94/28227, of record) in view of Nakazawa (US 4,141,082, of record) and Mathis (US 5,680,653, newly cited) and optionally in view of Allen (US 5,843,068, newly cited).

Morris teaches a method of fusing a woven or knitted fabric (woven fabric of claimed invention) to an interlining, which can be a woven, woven biased, knitted, or nonwoven fabric (Page 2, 1<sup>st</sup> Paragraph and Page 3, 4<sup>th</sup> Paragraph). In this instance, the following two-step process is used: (a) applying heat and pressure to the woven

fabric and (b) fusing the thus treated woven fabric to said interlining, wherein step (a) imparts a degree of stretch to said woven fabric. One of ordinary skill in the art at the time of the invention would have found it obvious to practice the method of Morris using a single step since it is recognized in the clothing industry that a single step can be utilized to impart a desired degree of stretch (results from shrinkage of fibers) and accomplish bonding between a woven fabric and an interlining. Mathis (Figure 3, Column 4, Lines 15-30, and Column 8, Lines 11-25) provides one example of a similar process involving the manufacture of an elastic band (waistband) for the clothing industry wherein bonding and stretch are simultaneously achieved via a single processing step in an analogous manner to the claimed invention. It is emphasized that (a) the materials for the respective layers of Mathis are analogous to those of Morris and (b) the one-step process disclosed by Mathis is consistent with the method and apparatus (nip roller construction) of Morris. One of ordinary skill in the art at the time of the invention would have been motivated to use a single step process since it facilitates the processing of the respective fabrics (eliminates multi-step process) while providing suitable adhesion between said fabrics. It is noted that such a one-step technique would necessarily impart compressive shrinkage in the interlining. Allen is optionally applied to further recognize the manufacture of a similar elastic band in which a multi-layer assembly is bonded via a single step process (Figure 3 and Column 8, Lines 6-57), wherein the nip roll can be heated or unheated. Lastly, in describing the interlining, Morris suggests a woven, woven-biased, knitted, or woven fabric- the reference is completely silent with respect to the specific materials used to form said interlining. One

of ordinary skill in the art at the time of the invention would have found it obvious to use either polyester or polyamide (thermoplastics) since they represent extremely well known and extensively used interlining materials in the manufacture of clothing articles, as shown for example by Nakazawa (Column 5, Lines 28-30).

Regarding claim 2, the woven fabric of Morris can be wool or cotton (Page 2, 1<sup>st</sup> Paragraph).

As to claims 4 and 6, the method of Morris includes an adhesive layer (Page 3, 3<sup>rd</sup> Paragraph).

With respect to claim 8, the interlining is described as being either a woven, woven biased, knitted, or nonwoven material (Page 3, 4<sup>th</sup> Paragraph).

Regarding claims 13 and 14, as noted above, Morris suggests a woven fabric for the interlining. Additionally, one of ordinary skill in the art at the time of the invention would have found it obvious to form the interlining from polyester or polyamide as they represent common thermoplastic materials that are extensively used in the manufacture of interlinings, as shown for example by Nakazawa.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morris, Nakazawa, Mathis, and Allen as applied in claim 4 above and further in view of Borge (US 3,616,150, of record).

As noted above, Morris in view of Nakazawa, Mathis, and Allen suggest a single-step process of laminating a woven fabric to an interlining fabric comprising applying adhesive to a first surface of said woven fabric and hot pressing the respective layers. While Morris, Nakazawa, Mathis, and Allen fail to describe the specific adhesive used,

one of ordinary skill in the art at the time of the invention would have found it obvious to use a polyurethane because it represents an extremely well known adhesive material that is extensively used when bonding fabric layers in the manufacture of clothing and additional garments, as shown for example by Borge (Column 2, Lines 50-60 and Column 3, Lines 15-25). It is emphasized that Borge is similarly directed to the manufacture of a laminated article for use in clothing and garments. Thus, Borge recognizes the use of polyurethane adhesives in the lamination of woven fabric layers, such as cotton- one of ordinary skill in the art at the time of the invention would have been particularly motivated to use a polyurethane adhesive since it requires less energy, as compared to acrylics and additional adhesives, for complete curing.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morris, Nakazawa, Mathis, and Allen as applied in claim 8 above and further in view of Kavesh (US, 4,819,458, of record) and optionally in view of Dagg (GB, 2,307,167, of record).

As noted above, Morris in view of Nakazawa, Mathis, and Allen disclose a method of laminating a woven fabric to a nonwoven fabric comprising applying adhesive to a first surface of said woven fabric and laminating the respective layers via heat and pressure. While Morris fails to expressly suggest that the woven fabric is tensioned during processing, one of ordinary skill in the art at the time of the invention would have found it obvious to tension said woven fabric since such a technique is extremely well known in the manufacture of clothing articles in order to impart a desired pattern (against direction of shrinkage), as shown for example by Kavesh (Column 1, Lines 37-50 and Column 4, Line 58 – Column 5, Line 20). Dagg is optionally applied to further

evidence the well known use of tensioning during bonding of fabric layers in the manufacture of clothing articles (Page 8, 2<sup>nd</sup> Paragraph). Thus, tensioning is recognized in the clothing industry as a suitable processing technique when dealing with heat shrinkable fabrics, such as wool, there being no conclusive showing of unexpected results to establish a criticality for the claimed tensioning.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1,4-10, and 13-15 have been considered but are moot in view of the new ground(s) of rejection. In light of applicant's arguments, the rejections with Kobari have been withdrawn. However, Mathis (newly cited) is directed to a method of forming an elastic band (waistband) in which a pressure is applied along the length of the fabric assembly in an analogous manner to the claimed invention. Thus, the prior art recognized the ability to form waistbands in a single step as opposed to separately bonding an interlining thereto. Allen has been optionally applied to further evidence the manufacture of elastic composite assemblies in the clothing industry via the claimed one-step technique. In this instance, the fabric assembly is fed through a pair of nip rollers, which can be heated or unheated. One of ordinary skill in the art at the time of the invention would have found it obvious to perform a one-step process in the method of Morris in order to facilitate processing of the respective fabrics (eliminates multi-step process) while providing suitable adhesion between said fabrics, wherein only the expected results would be achieved.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is (571) 272-1215. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Justin Fischer

April 12, 2005